Appl. No.:   09/741,747
Amdt. Dated: 12/17/2004
Off. Act. Dated: 03/16/2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-3 (canceled)

4. (previously presented): A method for determining the loss rate of a traffic source, comprising:

transmitting the frames of an actual or simulated traffic source into a peak-rate shaper having an input queue mechanism and producing a new time sequence for the bit-stream of the input traffic source as output traffic at rate r ;

collecting the bit-stream at the output of the peak-rate shaper $a(r,t)$ into a leaky-bucket shaper, said traffic source at said output having a transmission rate p and a buffer of size B ;

recording busy periods of the traffic source at rate p received in buffer of size B ;

recording buffer points at which loss occurs for each busy period recorded; and determining the maximum loss for buffer size B at rate p.

5. (original): A method as recited in claim 4, further comprising plotting a loss rate curve for a desired range of buffer sizes B of interest by executing additional iterations to determine maximum loss rate across the range of buffer sizes.

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6. (previously presented): A method of determining loss rate for a traffic source at a given rate ρ received in a buffer of size B, comprising:

transmitting the frames of an actual or simulated traffic source into a peak-rate shaper having an input queue mechanism, and producing a new time sequence for the bit-stream of the input traffic source within an output traffic of rate r;

collecting the bit-stream at the output of the peak-rate shaper $a(r,t)$ into a leaky-bucket shaper, said traffic source at said output having a transmission rate ρ and a buffer of size B;

determining the set of active periods and associated queue lengths for the frames of the traffic source at rate ρ;

determining busy periods for rate ρ and buffer size B; and

iteratively examining the busy periods to determine points of loss and busy period breaks for the given buffer size B; and

outputting maximum detected loss rate.

7. (previously presented): A method as recited in claim 4, wherein the traffic source comprises a data stream selected from the group of data streams consisting of multimedia data streams, elementary video streams, and MPEG-2 transport streams.

8. (previously presented): A method as recited in claim 6, wherein the traffic source comprises a data stream selected from the group of data streams consisting of multimedia data streams, elementary video streams, and MPEG-2 transport streams.

9. (previously presented): A method as recited in claim 6, wherein piecewise linearity is exploited between arising points of loss and busy period breaks to define a loss curve indicating loss rate versus buffer size B for a given value of transmission rate ρ.

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10. (previously presented): A method as recited in claim 9, further comprising computing loss curves across a range of given transmission rates ρ, to provide three-dimensional information about losses with respect to buffer size B and transmission rate ρ.

Claims 11-16 (canceled)